
COMMONWEALTH of VIRGINIA

Natural Area Preserve Management Guidelines

Virginia Department of Conservation and Recreation
Division of Natural Heritage
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Commonwealth of Virginia

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Department of Conservation and Recreation
Division of Natural Heritage
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Division of Natural Heritage**

Natural Area Preserve Management Guidelines

Overview

Natural area preserves in Virginia are managed for the objective of providing suitable habitat conditions for the continued existence of rare or declining species of plants and animals, and also to maintain rare and exemplary natural community types. Active management actions are often required to meet objectives, as is the case in many better known fields of natural resources management. For example, actions are taken in order to: (1) protect fragile and rare habitats from the potentially destructive impacts of human visitation while still allowing compatible and appropriate types of public use; (2) reinstate the natural process of fire through the use of prescribed burning to create and maintain habitat conditions required by fire-adapted and fire-dependant species and communities; (3) restore altered water flows and soil moisture regimes by blocking ditches or removing fill; (4) control invasive plants that rapidly usurp resources and occupy habitats of rare species while obliterating natural communities.

These management guidelines are intended to explain the general rationale for managing rare species and natural communities, to clarify the reasons for restricting public use and visitation, and to state principles and ideas that guide management of natural areas with the goal that they will perpetually sustain their valuable and vulnerable resources.

Introduction

The Virginia Natural Area Preserve System was established by law in 1989 to protect and conserve *natural heritage resources* (habitats of rare plants and animals; exemplary natural communities; other rare natural features) throughout the state. This system of protected lands is administered by the Virginia Department of Conservation and Recreation (DCR) and managed by the Division of Natural Heritage (DNH). Natural Area Preserve Dedication, in accordance with the Code of Virginia sections 10.1-209 - 217 (Virginia Natural Area Preserves Act), offers strong levels of protection by placing privately and publicly held natural areas into a legally established statewide preserve system with statutory protection against most forms of condemnation and conversion to other land uses.

These guidelines were developed by DCR–DNH to provide management direction for dedicated natural area preserves in Virginia. Natural area preserves may constitute a portion of larger conservation areas such as state parks, municipal watersheds, county forests, and privately-owned open spaces. Such lands usually have recreation and/or commodity and income production as primary management objectives; thus, they nearly always have a broader set of compatible uses than is appropriate for natural area preserves.

Natural areas often support fragile habitats that are easily disturbed and sometimes destroyed by the presence of people. In a world dominated by humans, most natural areas have been modified

to varying degrees by past and on-going land-use activities, and by introductions of non-indigenous species of plants and animals. The result, in some cases, has been the suppression or elimination of natural processes such as fire and flooding. These agents of disturbance are required to maintain successional stages that provide habitat for certain species or that result in the formation of distinct communities. Often, the introduction of exotic and invasive plants and animals poses a threat to native species and natural community integrity. For these reasons, a “hands-off” approach will usually not meet the objectives of natural areas stewardship. Natural area stewards must identify which processes are involved in maintaining communities and the habitats of rare species in order to develop successful management strategies and prescriptions.

The primary and over-riding objective of natural areas stewardship is to provide for the continued presence of natural heritage resources. Attaining this objective may require management actions that result in perpetuation of a particular successional vegetative stage (habitat condition) required by a rare species or characterizing a natural community. Actions are taken that maintain, restore, or mimic natural processes and result in a particular desired vegetative structural and compositional condition. Thus, natural area stewards may work to prevent an unnatural, harmful disturbance (such as invasion by a non-native plant like kudzu) and allow or promote a natural, appropriate disturbance (such as fire) to maintain a rare grassland or prairie community in the Shenandoah Valley. By taking such actions, the natural processes and conditions that allowed the rare species or community to occur at the site are restored, to the extent possible.

Natural Area Preserve (NAP) Management Plans are written for all dedicated natural area preserves in Virginia. Plans are comprehensive and contain specific site and resource information plus management objectives and action recommendations that guide preserve stewardship and allow for management continuity over time. With assistance from various sources and organizations, DCR–DNH staff lead the assembly of information and development of management strategies aimed at enhancing, maintaining, and/or restoring the natural heritage resources for which the site was protected.

Public Use

Natural area preserves are acquired and managed primarily to perpetuate the long-term quality, condition, and viability of natural heritage resources contained or supported within their boundaries. Some natural area preserves can be managed to meet this objective while at the same time accommodating some level of public use. Compatible and appropriate types of uses for each preserve are identified through the management planning process. Visitor use is monitored by natural area stewards and data is used for refining public use and visitor access objectives. Some preserves contain extremely fragile habitats and species that are damaged by even low levels of visitation. Other preserves are more resilient and may be capable of sustaining higher levels of public use. Some preserves may be closed seasonally but open for visitor use at specific times of year. At others, visitation may be restricted to specific areas – such as along a designated trail or boardwalk.

Public use of natural area preserves can conflict with the primary natural heritage resource management and protection objective mandated by the Virginia Natural Area Preserves Act. The term “public use” as used here includes such activities as hiking, camping, biking, fishing, hunting, swimming, research, and education. It is a plain fact that human visitors often harm or threaten population viability of rare plants and animals, as well as their often-fragile habitats. The degree of damage depends on the frequency, intensity, and location of visitor activity. Some level of public use may be considered as appropriate if the characteristics of visitation and use are compatible with the resource protection priority and if such use does not threaten or degrade occurrences of natural heritage resources. Additionally, with the scarcity of funds to support natural areas management, costs to monitor and manage public use cannot be excessive.

Guidelines relating to specific types of public uses in the context of natural areas management follow. These are organized into three use categories, based on their appropriateness under normal circumstances and management situations.

Category 1: Normally Appropriate Uses

Birding, wildlife-watching, wildflower and native plant observation, photography.

These non-consumptive uses by the public are often compatible with natural areas management. Populations of plants and animals are simply being observed, often at a distance, with no collection, disturbance, or resultant change in population condition. At some sites, trails or observation platforms may be beneficial for managing impacts of large groups or increased numbers of visitors participating in these activities. Particularly on fragile sites such as mountaintop balds, rock outcrops, and wetlands, repeated foot travel can damage local habitats and trample rare plants. Visitation may, in some cases, need to be limited to specific seasons. Such is the case with preserves supporting populations of colonial beach nesting birds, so that nesting success is not decreased as a result of the presence of humans.

Hiking. Trails and vestiges of old roads nearly always exist as a result of land use prior to the establishment of a natural area preserve. Such trails may or may not be appropriate for public use by hikers, depending on factors such as proximity to occurrences of natural heritage resources, active erosion, wetland crossings, and other terrain features. New trails, if they are to be constructed, should be carefully located and maintained. All proposals for new trails in a natural area preserve, whether for recreation, research, or education, will be reviewed by the Natural Area Preserve Public Access Oversight Committee, co-chaired by the DCR–DNH Division Director and Stewardship Manager.

A map of existing and proposed trails will be included in the preserve Management Plan section on public access. This section will describe the purpose and physical characteristics of preserve trails. On most DCR-owned preserves, trail maintenance and use monitoring is the responsibility of the regional DNH Natural Area Operations Steward. Trail use monitoring assesses the number of trail users, the specific aspects of trail maintenance, and the extent to which users stay on designated trail routes. Careful attention is given to monitoring whether occurrences of natural heritage resources are being degraded by visitors using trails. It is notable that adverse effects from trail use are difficult to detect before damage has occurred and that once public use

patterns are established, they are not easy to change. As needed, DNH staff will consult with Division of Planning and Recreation Resources and Division of State Parks staff to develop strategies to protect sensitive resources. Actions for reducing access to sensitive areas will include blocking roads and trails with gates and rocks, and installing interpretive signs explaining the purpose for access restrictions in natural area preserves.

Research. Numerous possibilities for research exist on natural area preserves. Baseline inventory work is often needed, such as floral, faunal, and community surveys. Research that increases knowledge about local microclimates, soils, geology, and hydrology of the area greatly benefits and informs preserve management decisions. To the extent possible, DNH will support scientific studies that show promise to fill knowledge gaps in natural area preserve and natural heritage resource management. Proposals for research funding support on natural area preserves will be reviewed on an individual basis. Studies to be conducted on preserves will require prior submission of a Research and Collecting permit application, review and approval by DNH staff, and issuance of a written permit. Research methods will be used that minimize adverse effects on natural heritage resources and physical features at the preserve. At project conclusion, researchers will be required to remove evidence of their work such as residue from destructive sampling techniques (clipped plots), temporary shelters for instrumentation, plastic flagging, and visual plot locators such as stakes, wire flags, or sampling station monuments

Teaching and interpretation. The use of natural area preserves for educational programs is highly appropriate. Natural areas present an opportunity to observe many rare forms of life as well as the natural processes that maintain them. Preserves are also ideal locations for introducing students to the concept and value of biodiversity and for educating people of all ages of the need for broad and comprehensive approaches to natural resource management. As with other public uses of natural areas, teaching and interpretation activities must be managed to prevent adverse impacts on natural heritage resources. DNH staff and/or responsible volunteer instructors should accompany all group field trips to natural area preserves.

Category 2: Conditionally Appropriate Uses

Fishing, picnicking, canoeing. Whether or not these activities constitute appropriate public uses depends on (1) the site-specific characteristics of a particular natural area and (2) the observed consequences of such uses. For example, circumstances may allow low numbers of fishermen to use a beach that supports rare beach nesting birds and animals. At some preserves, however, there is clear justification for prohibiting these uses because they are known or expected to cause negative impacts to rare species. In all cases, where allowed, the effects of such uses will be monitored. If negative impacts to natural heritage resources are observed, the causative public use(s) will be discontinued.

Swimming. Swimming is not an authorized activity on DCR-owned natural area preserves, due primarily to the issue of public safety. With no lifeguards or patrols in place on public beaches or waterways, responsible landowning public agencies cannot officially sanction swimming. Rather, in nearly all cases, they must prohibit or actively discourage it. On privately-owned natural area preserves, decisions to allow swimming or to prohibit it are the responsibility of the

landowner. In cases where beach uses such as sunbathing and beach-walking result in direct damage to fragile beach and dune habitats that support rare species, such impacts will be documented and the specific causative use(s) discontinued.

Hunting. As with fishing, hunting is not necessarily incompatible with natural area preserve management. Hunting may be both compatible and necessary for the purpose of controlling populations of animals that need to be limited such as white-tailed deer, nutria, snow geese, or resident Canada geese. However, hunting is an activity that can and often does result in conflicts between user groups. For example, public use by birders and wildlife watchers who visit a preserve to view migratory waterfowl is not compatible with concurrent waterfowl hunting. Likewise, use of a preserve by nature photographers or educators would not be a compatible use during periods when hunting activities to achieve control of the local deer population were taking place. In most instances, hunting on natural area preserves will be limited temporally and conducted specifically to meet the management objective of controlling animal populations that, if left unchecked, present a threat to natural heritage resources on site.

Category 3: Incompatible and Inappropriate Uses

Camping. Camping activities inevitably result in repeated localized intensive use and long-term degraded site effects. Even low-intensity camping styles cause some adverse impacts. And while “no trace” camping practices have much to recommend them, DCR–DNH does not have the capacity to monitor campers and ensure that they follow such practices. Additionally, if “no-trace” or other camping styles were allowed on state-owned preserves, increasing numbers of people would request camping access and many would not abide by “no trace” practices. Thus, permitting camping would lead to gradual habitat degradation and negative impacts on rare species. For these reasons, camping is considered incompatible with the objectives of the Virginia Natural Area Preserve System and is prohibited.

Bicycles. Except for accessing established parking areas and public access points designed for automobiles, use of bicycles in natural area preserves is prohibited. Mountain biking has become a popular outdoor activity that exerts increasing pressure on sensitive natural areas. If bicycle use has occurred in a preserve or if ready access exists, management actions will be taken to inform riders that biking is not permitted. If feasible or needed, access will be blocked with signs and/or barricades placed in strategic locations. Adverse effects from mountain bikes may be difficult to detect before damage has occurred. Given that bicycle riding patterns are difficult to change once established, it is imperative to quickly develop strategies to protect natural heritage resources from this incompatible use once such use is detected.

Horseback riding. This use is inappropriate for natural area preserves due to the well-documented negative impacts to soils and vegetation of concentrated and frequent passage of horses. Additionally, the introduction of invasive weeds from both manure and hoof-borne vectors is a documented negative aspect of horseback riding in areas managed for natural heritage resources. While infrequent use may cause minimal impacts, increased levels of use are inevitable on public lands. Thus, as with bicycles, horseback riding is nearly always an inappropriate and incompatible use on lands managed as natural area preserves.

Rock climbing and caving. Rock outcrops, cliffs, and caves are among the most fragile of habitats and support some of the rarest occurrences of natural heritage resources in the state. The repeated presence of humans at these places often leads to habitat degradation and, if prolonged or chronic, is well-known to cause damage or extirpation of rare species of plants and animals. For this reason, access to most cliffs, rocky peaks, and caves on natural area preserves will be restricted to designated trails or observation points *only*, or to visitation during an organized field trip, or following issuance of a written Research and Collection or Special Use permit from DCR–DNH.

Off-road vehicles. Motorized all-terrain-vehicles including SUVs, “four-wheelers,” and dirt bikes are prohibited within natural area preserves. These uses degrade trails and cause severe erosion requiring expensive repairs. Noise pollution from vehicle engines reduces the quality of the outdoor experience for other authorized user groups and constitutes harassment to wildlife. The use of such motorized vehicles is perhaps the most incompatible of all public use categories in natural area preserves.

Unleashed pets. Visitors are not prohibited from bringing pets with them when visiting natural area preserves. However, by regulation, pets must at all times remain under leash restraint while on DCR-owned lands. Unleashed dogs pose a particular threat to natural heritage resources and to various species of wildlife. Free-roaming dogs are known to cause nest abandonment in shore nesting bird colonies and to harm or destroy ground nesting bird eggs and young. Digging activity by dogs also causes habitat degradation on beaches protected for rare animals such as northeastern beach tiger beetles. For these reasons, all dogs or other domestic animals accompanying human visitors to natural areas preserves must be kept on leash at all times.

Collection of plants, animals, minerals, or artifacts. In order to protect occurrences of rare species, the collection and removal of plant material, animals, minerals (rocks), or artifacts is prohibited. The one exception to this guideline is the non-commercial, incidental gathering of common species (e.g., blackberries, blueberries, strawberries) for personal consumption. However, some rare species that produce an edible berry are native to Virginia and should not be picked. In such instances and locations, signs will be posted to inform the public in order to prevent negative effects to rare species from incidental collection. For legitimate research and education purposes, collection of specimens may be approved by DNH following submission and review of an application for a natural area preserve Research and Collection permit.

Site Operations Management

Roads

Many preserves have existing roads from previous land uses. Building new roads is nearly always inappropriate in natural area preserves and seldom is there sufficient justification to do so. Even roads outside of the preserve, especially along boundaries, may adversely affect resources within the preserve due to impacts such as introduction of invasive species, noise pollution, and alteration of local hydrology. Existing interior roads, skid trails, or historic traces will be mapped and described in Natural Area Preserve (NAP) Management Plans. Roads within preserves will be considered for closure or obliteration if they have no specific utility or function

for preserve stewardship, or if such closure would reduce negative impacts to natural heritage resources or cause a decrease in vandalism to preserve facilities and infrastructure. Road maintenance schedules and costs will be included in NAP Management Plans.

Rights-of-way

Utility corridors such as powerline rights-of-way can and do exist in natural area preserves. Siting of new corridors within preserve boundaries is highly inappropriate and should be prevented by preserve Deed of Dedication language. Rights-of-way agreements or easements particular to a preserve will be appended to the NAP Management Plan, along with a list of contacts regarding agreements and corridor maintenance. All non-DCR entities (rights-of-way maintenance contractors, utilities, municipalities, etc.) should be informed of the sensitivity and importance of natural heritage resources in the preserve. Frequency and methods for rights-of-way maintenance will be used that have the fewest negative effects on natural heritage resources. Such coordination will decrease adverse impacts to rare species and increase DCR inclusion in planning for expansion or improvement to utility corridors near or within natural area preserves.

Access Points

Public access facilities and points of entry to preserves will be designed so as to meet the primary objective of protecting natural heritage resources. Access designs will first and foremost function to restrict or direct visitor activity in ways that protect fragile habitats. Determining and mapping the location of sensitive areas within the preserve is essential so that threats can be abated and vulnerable resources protected. All proposed and existing structures and signs at preserve entrances will be described in NAP Management Plans. Additional needs for improved parking, interpretive signs, and trails will be discussed and approved by the NAP Public Access Oversight Committee prior to project implementation.

Facilities and Infrastructure

Guard rails, signs, fences, gates, trail steps, and other devices or measures may be installed as necessary for site security and visitor safety. Such infrastructure should be described and justified in each NAP Management Plan. Potentially dangerous conditions such as dead trees, branches, abandoned wells or pits, and similar hazards on trails or in authorized public use areas may be removed, cleared, filled in, or otherwise remedied. When in accordance with the NAP Management Plan, evidence of past human use such as fences, fence rows, culverts, trash dumps, and abandoned vehicles or structures (having no historic or scientific value) may be removed from the preserve.

Biological Resource Management

Prescribed Burning

Prescribed burns will be conducted to restore, enhance, and maintain fire-adapted natural communities, control invasive species, and accomplish various other objectives as identified in NAP Management Plans and in accordance with guidance from DNH fire managers and fire ecologists. DNH stewardship staff with training and experience in fire management that hold Virginia Prescribed Burn Manager Certification will, in conjunction with reviews and approval by other fire managers, prepare a written burn plan for each prescribed burn project. All required

permits and approvals shall be obtained for each project. Burning shall not be attempted under conditions more hazardous than those specified in the prescribed burn plan. The use of equipment and motorized vehicles, size and roles of the burn crew, identity of the fire leader, time of year for the burn, frequency of burning, amount of area to be burned, and other detailed information pertinent for conducting a burn shall be specified in prescribed burn plans.

Prescribed burn plans shall be reviewed and approved by a DCR Fire Manager. The implementation of prescribed burn plans will require the concurrence of the Director of the Department of Conservation and Recreation, or his/her designee, and the Director of the Division of Natural Heritage. Stewardship objectives of prescribed burning shall be stated in NAP Management Plans. As appropriate and needed, monitoring of animal, plant, or community responses will be accomplished in order to determine efficacy of burn projects. Copies of unit burn prescriptions and monitoring reports will be completed and archived in the DNH NAP management files.

Restoration of Natural Hydrology

Hydrologic conditions altered by human activities such as drainage or fill placement may be restored, as appropriate, to create soil moisture regimes necessary for the benefit and enhancement of rare species and natural community occurrences. Stewardship actions that affect hydrology will be conducted for the purpose of meeting habitat maintenance and restoration objectives for which the preserve was established. Specific actions will be described in NAP Management Plans and be in accordance with local, state, and federal laws and regulations.

Erosion Control and Conservation Plantings

Control of erosion in natural area preserves that result from human disturbance may be accomplished through conservation plantings or by other means in order to meet natural heritage resource stewardship goals, to protect water quality, and to abate man-induced soil loss arising from previous land surface alterations. Species native to Virginia (and if possible, native to the specific region) will be used for conservation plantings to achieve soil stabilization. Planting non-native and/or invasive alien species is inappropriate on natural area preserves as well as in other natural settings, and such plantings are now widely discouraged for most natural resource conservation projects. In addition, erosion problems on adjacent or nearby lands that impinge on preserve stewardship issues may be addressed in cooperation with DCR's Division of Soil and Water Conservation and the landowner. Erosion mitigation plans will be developed as needed in cooperation with appropriate agencies, parties, and stakeholders

Invasive Species Control

Measures to control invasive plants and animals will be taken using accepted methods consistent with objectives stated in NAP Management Plans. The term "control of invasive species" may in some cases include the control of plant succession, even if targeted plants are native to Virginia. Actions recommended for the control of any plant or animal species, noxious or otherwise, will be described in NAP Management Plans.

Insect and Disease Control

Insect or disease control programs will be undertaken only if the infestation or outbreak (1) threatens adjacent natural areas, (2) will drastically alter natural ecological processes within the natural area preserve or cause adverse economic impacts on adjacent property, or (3) constitutes a public health emergency provided that such control programs are approved by the managing agency or are provided for by law.

Pesticide Use

The use of certain pesticides is one means by which natural area preserve stewards may accomplish specific management objectives. NAP Management Plans describe those situations under which pest management, such as invasive plant control programs, will be undertaken. Pesticide use in the context of natural area stewardship is mostly limited to herbicide applications for controlling (1) invasions of exotic vegetation that threaten on-site occurrence of rare species or natural communities or (2) weedy growth in public access facilities such as parking areas. Other use of pesticides should be made only with project review and approval by DNH staff or by consent of the managing entity or agency.

Forest Harvesting and Silviculture

The objectives of management for natural area preserves focus on (1) minimizing soil disturbance to retard or prevent invasive plant introductions, (2) retention and restoration of natural hydrological regimes and nutrient cycles, and (3) taking other actions to alter or maintain habitat conditions that favor the expansion of populations of rare species of plants and animals. Objectives of natural area preserve management do not include production of a continuous supply of forest products or income streams. Many silvicultural practices such as chemical and/or mechanical site preparation, fertilization, drainage, and plantation establishment are, in most instances, not compatible with protection and stewardship goals on natural areas as they can conflict with the goal of maintaining and enhancing natural plant communities and rare species habitats.

Nevertheless, actions such as cutting, deadening, or removing trees are not necessarily incompatible with natural areas management. Some silvicultural activities may be appropriate tools for natural area preserve management, but only when the objective is improvement or creation of habitat conditions for a targeted rare species or natural community. For example, thinning and burning a pine stand in order to favor shade-intolerant endangered plants such as smooth coneflower, or removing loblolly pine in order to restore a longleaf pine savanna may be high priorities requiring specialized forest harvesting plans for some natural area management programs. Such thinning and overstory removals may even, in some cases, best be accomplished through the process of conducting a timber sale.

When alterations to existing structure and composition of forest vegetation are appropriate and necessary to benefit natural heritage resources, natural area preserve stewards may make use of practices or treatments that closely resemble those of silviculture. Management plans for natural area preserves should clearly designate what vegetation management practices are to be used and for what objectives.

Traditional Wildlife and Fisheries Management

Natural area preserves are not purchased or managed for the objective of providing fishing, hunting, or trapping opportunities for the general public. It is therefore inappropriate to take management actions on preserves with the specific intent of improving consumptive recreation opportunities. However, certain types of hunting, fishing, or trapping activities may, at times, be considered compatible with preserve stewardship goals. For example, hunting may occur on some preserves under circumstances such as retained rights, conditions of transfer, traditional use, or to meet population reduction objectives. Hunting, fishing, and trapping activities for the purpose of protecting or enhancing natural heritage resources will be described in site-specific NAP Management Plans.

Rare Species Recovery

A primary objective of natural areas management is to conduct activities which provide or enhance habitats for plants and animals that have not benefited from common, traditional, or commercial land management regimes. Management of endangered, threatened, and special concern species of both plants and animals, plus non-listed species which may be of management concern on a particular natural area preserve, will receive close attention from natural area managers. Habitat manipulations and protective measures favoring a particular species will be undertaken as specified in NAP Management Plans. Monitoring of the target species will be undertaken in order to assess effectiveness of recovery or management actions.

Reintroduction as a means for rare species recovery will be considered only as a last resort and only when it is clear that reinstating natural processes and/or threat and stress mitigation will not result in population recovery. Intentional introductions of plant material of any type or kind of propagule (plant, cutting, seed, shoot, rhizome, rootstock, bulb, corm, etc.) or of any animal will be made only with review and approval, on a species by species and site by site basis, by a DNH oversight committee consisting of the Division Director, Stewardship Manager, and Chief Biologist.

Livestock Grazing and Crop Production

In nearly all cases, domestic livestock grazing is incompatible with the objectives of natural area preserve management. Concentrated grazing by cattle, horses, sheep, or other stock cannot be rationally argued to mimic a natural process; e.g., to simulate the effects once produced by native grazing animals such as bison or elk. Negative grazing effects commonly include degradation of stream banks and reduction of downstream water quality. Eliminating grazing and allowing or facilitating reestablishment of stream bank vegetation is one sound method of riparian buffer restoration.

However, certain exceptions are noteworthy of mention. Some natural area managers have experimented and seen positive results with grazing of goats in mountain bald communities for the control of invading woody species. Specialized circumstances may exist, such as retained rights or conditions of sale where grazing is continued for a specified time period. In such cases, detailed records will be kept on stock density, timing, and duration of grazing. A monitoring program will be designed and exclosures may be established to evaluate the effects of grazing. Management options for reducing negative grazing impacts to natural heritage resources should

be developed under the guidance of the NAP Management Plan. These options may include shifting the season of grazing, providing resting periods, changing stocking levels, appropriately locating water, shelter, and mineral supplements, and rehabilitating soil.

As with grazing of stock, crop production for agricultural production purposes is not compatible with natural area preserve management. Except in the case of retained rights or short-term leases in specialized instances, the use of natural areas for producing crops of any kind, including forages, grains, leaf, vegetables, or fruits is not consistent with the purpose and objectives for establishing and managing natural area preserves.

Archeological and Historic Resources

Archeological and historic resources on natural area preserves will be protected. Inventories for archeological and historic resources will be conducted and recommendations for conservation will be included in NAP Management Plans. Resources may be considered for interpretive and/or research value as identified and prescribed in the Plan. The collection of artifacts will be discouraged and only permitted for justified research studies approved by the Department of Historic Resources and the Department of Conservation and Recreation.

Eligible historic structures will be surveyed and nominated for placement on the Virginia Landmarks Register. Archeological research may vary, from recordation surveys where no collection or excavation is performed, to intensive excavations usually focused in a confined area. Consequently, compatibility of archaeological research and natural area preserve stewardship may vary and each proposed action should be assessed on an individual basis.

Certain resources are protected by established statutes, regulations, and guidelines. Activities which would in some way affect significant historic resources may require review and/or permitting by the Department of Historic Resources. Pertinent statutes to consider include the Virginia Antiquities Act, Virginia Cave Protection Act, Appropriations Act, and the National Historic Preservation Act.

Minerals

Mineral exploration and extraction are incompatible and inappropriate uses on natural area preserves, and are prohibited in all cases. Soil disturbance, especially at the scale necessary to remove mineral resources, is clearly at odds to the purposes and objectives of natural area preserve establishment and stewardship. Simply stated, dedicated natural area preserves will have no mineral exploration or exploitation. Collection of any surface mineral specimens for research or educational purposes requires the prior issuance of a Research and Collection permit by the Department of Conservation and Recreation.

Modifications

Modifications to these Natural Area Preserve Management Guidelines shall require the approval of the Director of the Department of Conservation and Recreation, or his/her designee.